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Document Name:

O'Hare Modernization Program Diesel Vehicle Emissions Controls

Organization/Agency Responsible:

O'Hare Modernization Program

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Description: O'Hare Modernization Program

The Chicago O'Hare Modernization Program (OMP) developed design and construction standards for construction equipment and vehicles that reduce air emissions through cleaner fuels, diesel oxidation catalysts (DOCs) and diesel particulate filters (DPFs), ultra-low sulfur diesel fuel (ULSD), idling restrictions, and cleaner vehicle options.

CONSTRUCTION AIR QUALITY – DIESEL VEHICLE EMISSIONS CONTROLS
SECTION 01111

PART 1 GENERAL

1.01 DESCRIPTION

A. The O'Hare Modernization Program (OMP) developed a "Sustainable Design Manual" (SDM) as an integral part of the overall design and construction standards for the OMP. (City of Chicago, O'Hare Modernization Program, Sustainable Design Manual. O'Hare Modernization Program. December 2003 can be found at **www.oharemodernization.org**, see "OMP Public Information".) Its vision states that "O'Hare International Airport will continue to evolve as a benchmark for environmental stewardship in design and construction. The OMP will embrace the best possible environmental, social, and fiscally responsible practices to enhance the quality of life and maintain consistency with the overall mission and goals of the City of Chicago."

B. Section 8.5 of the OMP SDM, "Clean Fuel Construction Vehicles", includes consideration of requiring "…that a portion of the construction vehicle fleet be clean fuel vehicles and/or incorporate clean air technologies."

C. The specifications herein meet and exceed the scope of Section 8.5 of the OMP SDM and will benefit the Chicagoland region by providing meaningful reductions in air emissions associated with OMP construction activity.

PART 2 PRODUCTS

2.01 FUEL USE REQUIREMENTS

A. The fuel use requirements apply to all off-road vehicles and equipment utilized by Contractors, Subcontractors and Suppliers that are on the project site for a minimum period of fourteen (14) consecutive calendar days.

B. The fuel use requirements apply to all on-road vehicles and equipment utilized by Contractors, Subcontractors and Suppliers that transport materials regularly to and from the Project site that exceed five (5) calendar days per month accessing the work site.

C. The contractor must utilize Ultra Low Sulfur Diesel (ULSD) for all diesel-powered vehicles and equipment (both mobile and stationary) with engine HP ratings of 50 HP or more that are utilized on the Project site. It should be noted that ULSD fuel is readily available in the Chicagoland area. Also, it should be noted that the requirements stated herein are compatible with, but in advance of, Federal requirements for the use of ULSD fuel for both on-road (2007) and off-road (2010) vehicles. The ULSD must conform to the American Society of Testing and Materials (ASTM) D975 with the following additional specifications:

1. ASTM D5453 15 ppm Sulfur maximum

2. ASTM D6078 Lubricity (SBOCLE) 3100g minimum

3. ASTM D613 Cetane 45 minimum

2.02 EQUIPMENT TECHNOLOGY REQUIREMENTS

A. The equipment technology requirements apply to all off-road vehicles and equipment utilized by Contractors, Subcontractors and Suppliers that are on the Project site for a minimum period of fourteen (14) consecutive calendar days.

B. These requirements do not apply to on-road vehicles and equipment, however Contractors, Subcontractors and Suppliers that transport materials regularly to and from the Project site are encouraged to follow these requirements to the best of their ability.

C. Requirements:

1. All off-road diesel-powered vehicles and equipment (both mobile and stationary), as applicable, with engine HP ratings of 50 HP or more, must install and or retrofit with emissions control devices that will reduce emissions prior to utilization of said equipment on the Project. The Retrofit Emission Control Devices must consist of diesel oxidation catalysts, diesel particulate filters or similar retrofit equipment control technology that

   a. is included on the EPA Verified Retrofit Technology List (http://www.epa.gov/otaq/retrofit/retroverifiedlist.htm) or verified by the California Air Resources Board (CARB) (http://www.arb.ca.gov/diesel/verdev/verdev.htm) or

   b. is verified by EPA or represented by the manufacturer in writing, to provide a minimum emissions reduction of

20% PM, 20% CO, and 40% HC when used with Ultra Low Sulfur Diesel fuel.

c. This requirement applies unless the vehicle or equipment is either EPA Tier 2 Rule compliant or meets the horsepower/model year defined in the table below:

Horsepower Range	Model Year (or newer)
50-99	2004
100-299	2003
300-599	2001
600-749	2002
750 and up	2006

2.03 INTERPRETATION OF REQUIREMENTS

A. The interpretation of these requirements and any determination of lack of compliance with these requirements may be made the subject of a claim to the Director. However, the Director's decision will be final. The Contractor may not file a dispute under Article XVII of Part 2 General Conditions.

PART 3 EXECUTION

3.01 GENERAL

A. Throughout the Project, the contractor will submit a certified monthly fuel report to the OMP CM, which lists the supplier and the amount of fuel delivered to each piece of equipment and each vehicle used on the Project to which the fuel use requirements apply. The Director has the option, in addition to any other remedies available to the City, to withhold monthly progress payments until such time as the Contractor submits the required information.

B. All vehicles and equipment to which this requirement is applicable will be subject to random inspections to ensure full compliance with these requirements. If any equipment is found to be non-compliant, the Contractor, Subcontractor or Supplier must remove or retrofit this equipment or vehicle within 24 hours or be subject to possible impoundment by the Department of Aviation until that piece of equipment or vehicle is removed from Project.

Prior to the start of construction the contractor must submit in writing a list of equipment to the OMP CM that will be utilized as part of the Project for inspection to ensure that all of these requirements have

been implemented. Equipment and vehicles brought on-site over the course of the Project must be submitted in writing on or before the date the equipment or vehicle is delivered to the site. The list(s) must include the following:

1. Contractor/sub-contractor name,

2. Equipment number, type, make, model, year, horsepower rating, and VIN,

3. EPA tier-rule compliant level or the emission control device make, model and EPA or manufacturer verification letter.

4. The Director has the option, in addition to any other remedies available to the City, to withhold monthly progress payments until such time as the contractor submits the required information.

C. Idling Restrictions

1. Idling of diesel powered vehicles and equipment must not be permitted during periods of non-active vehicle use. Diesel powered engines shall not be allowed to idle for more than five consecutive minutes in a 60-minute period when the equipment is; not in use, occupied by an operator, or otherwise in motion, except only as follows:

   a. When equipment is forced to remain motionless because of traffic conditions or mechanical difficulties over which the operator has no control,

   b. When it is necessary to operate auxiliary systems installed on the equipment, only when such system operation is necessary to accomplish the intended use of the equipment,

   c. To bring the equipment to the manufacturers recommended operating temperature,

   d. When the ambient temperature is below forty (40) degrees F or above eighty (80) degrees F, or

   e. When equipment is being repaired.

D. Clean Buses/Light Duty Vehicles

1. Contractors are encouraged to identify and incorporate any other measures that may assist in reducing air quality emissions as a result of Project construction. For example, many cleaner

vehicle options now exist for employee shuttle buses and Light Duty Vehicles (LDVs) including compressed natural gas (CNG), hybrid (fuel/electric), flex fuel, and demand on displacement. The availability of cleaner vehicle options is anticipated to expand over time and over the course of the Project. Contractors working on the Project are strongly encouraged to consider these options when making purchase decisions.

PART 4 METHOD OF MEASUREMENT

4.01 MEASUREMENT

A. Construction Air Quality and Diesel Vehicle Emissions Controls will not be measured separately for payment, but will be considered incidental to the overall contract.

PART 5 BASIS OF PAYMENT

5.01 PAYMENT

A. All costs associated with meeting these requirements are incidental to the overall contract. No additional time or monies will be granted to the contractor for compliance with these requirements and any associated regulations.

END OF SECTION 01111

(Contractor's Letterhead)

O'Hare Modernization Program
Ultra Low Sulfur Diesel
Contractor/Subcontractor Equipment Verification Report
Construction Air Quality – Diesel Vehicle Emissions Control
Section 01111

								EPA Compliance				
Contractor or Subcontractor	**Equipment Number**	**Type**	**Make**	**Model**	**Year**	**HP**	**VIN**	**EPA Tier Rule Compliant Level**	**Or**	**Make**	**Model**	**EPA or Manufacturer's Verification Letter?**

In connection with the above captioned project: I, (name), (title) of (company name), do hereby state that the information as it is portrayed above on this Equipment Verification Report is a true and accurate account of all equipment that is currently scheduled to be utilized on this project.

Company _____

Print Name _____

Title _____

Signature _____

Date _____

Machine #	Description	Unit #	Serial #	Year	Horsepower Rating	Tier	Date Retrofitted (if applicable)	Notes
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								

Certify the above information is accurate.

Company _____

Print Name _____

Title _____

Signature _____

Date _____

REVIEWED BY: _____

O’HARE MODERNIZATION PROGRAM
CONTRACTOR MONTHLY FUEL USAGE SUMMARY REPORT
[MONTH YEAR]

	Machine #	1	2	3	4	5	6	7	8	9	10
Date Fueled	**Day**	**Gallons**	**Gallons**	**Gallons**	**Gallons**	**Gallons**	**Gallons**	**Gallons**	**Gallons**	**Gallons**	**Gallons**
	Sun	x	x	x	x	x	x	x	x	x	x
	Mon										
	Tues										
	Wed										
	Thurs										
	Fri										
	Sat										
	Sun	x	x	x	x	x	x	x	x	x	x
	Mon										
	Tues										
	Wed										
	Thurs										
	Fri										
	Sat										
	Sun	x	x	x	x	x	x	x	x	x	x
	Mon										
	Tues										
	Wed										
	Thurs										
	Fri										
	Sat										
	Sun	x	x	x	x	x	x	x	x	x	x
	Mon										
	Tues										
	Wed										
	Thurs										
	Fri										
	Sat										
	Sun	x	x	x	x	x	x	x	x	x	x
	Mon										
	Tues										
TOTAL GALLONS USED:		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Certify the above information is accurate.

Print Name ____________________

Title ____________________

Signature ____________________

Date ____________________

REVIEWED BY: ______________________________
(Resident Engineer)

O'HARE MODERNIZATION PROGRAM
[YEAR] CONTRACTOR ANNUAL FUEL USAGE SUMMARY REPORT

Machine #	1	2	3	4	5	6	7	8	9	10
Month Fueled	**Gallons**	**Gallons**	**Gallons**	**Gallons**	**Gallons**	**Gallons**	**Gallons**	**Gallons**	**Gallons**	**Gallons**
January	x	x	x	x	x	x	x	x	x	x
February										
March										
April										
May										
June										
July										
August	x	x	x	x	x	x	x	x	x	x
September										
October										
November										
December										
TOTAL GALLONS USED:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Certify the above information is accurate.

Print Name _____

Title _____

Signature _____

Date _____

REVIEWED BY: _____
(Resident Engineer)

O'HARE MODERNIZATION PROGRAM
EQUIPMENT TRACKING FORM
Construction Air Quality – Diesel Vehicle Emissions Control Section 01111

Machine #	Description	Unit #	Serial #	Arrival	Departure	Status	Fuel	Notes
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								

Certify the above information is accurate.

Company _____

Print Name _____

Title _____

Signature _____

Date _____

REVIEWED BY: _____

(Resident Engineer)